WHAT IS CLAIMED IS:

1. A hair-cosmetic composition comprising, in a cosmetically acceptable medium, at least one film-forming gradient copolymer comprising at least two different monomeric residues, wherein the at least one film-forming gradient copolymer exhibits a mass polydispersity index (Ip) less than or equal to 2.5,

and wherein the composition is able to form a film that has at least one of the following characteristics:

- a strain at break ε_r ranging from 5% to 2500%, and/or

- a Young's modulus ranging from 0.5 to 1200 MPa, and/or

- an instantaneous elastic recovery ε_i greater than or equal to 10%.

2. The composition according to Claim 1, wherein the at least one film-forming gradient copolymer exhibits a mass polydispersity index (Ip) ranging from 1.1 to 2.3.

3. The composition according to Claim 2, wherein the at least one film-forming gradient copolymer exhibits a mass polydispersity index (Ip) ranging from 1.15 to 2.0.

4. The composition according to Claim 3, wherein the at least one film-forming gradient copolymer exhibits a mass polydispersity index (Ip) ranging from 1.2 to 1.9.

5. The composition according to Claim 1, wherein the composition forms a film that has a strain at break ε_r ranging from 10% to 2000%.

6. The composition according to Claim 5, wherein the composition forms a film that has a strain at break ε_r ranging from 15% to 1000%.

7. The composition according to Claim 1, wherein the composition forms a film that has a Young's modulus ranging from 1 to 1000 MPa.

8. The composition according to Claim 7, wherein the composition forms a film that has a Young's modulus ranging from 2 to 800 MPa.

9. The composition according to Claim 1, wherein the composition forms a film that has an instantaneous elastic recovery ε_i greater than or equal to 25%.

10. The composition according to Claim 9, wherein the composition forms a film that has an instantaneous elastic recovery ε_i greater than or equal to 35%.

11. The composition according to Claim 10, wherein the composition forms a film that has an instantaneous elastic recovery ε_i ranging from 10% to 100%.

12. The composition according to Claim 11, wherein the composition forms a film that has an instantaneous elastic recovery ε_i ranging from 25% to 98%.

13. The composition according to Claim 12, wherein the composition forms a film that has an instantaneous elastic recovery ε_i ranging from 35% to 95%.

14. The composition according to Claim 1, wherein the weight-average molecular weight of the at least one film-forming gradient copolymer ranges from 5,000 g/mol to 1,000,000 g/mol.

15. The composition according to Claim 14, wherein the weight-average molecular weight of the at least one film-forming gradient copolymer ranges from 5,500 g/mol to 800,000 g/mol.

16. The composition according to Claim 15, wherein the weight-average molecular weight of the at least one film-forming gradient copolymer ranges from 6,000 g/mol to 500,000 g/mol.

17. The composition according to Claim 1, wherein the number-average molecular weight of the at least one film-forming gradient copolymer ranges from 5,000 g/mol to 1,000,000 g/mol.

18. The composition according to Claim 17, wherein the number-average molecular weight of the at least one film-forming gradient copolymer ranges from 5,500

g/mol to 800,000 g/mol.

19. The composition according to Claim 18, wherein the number-average molecular weight of the at least one film-forming gradient copolymer ranges from 6,000 g/mol to 500,000 g/mol.

20. The composition according to Claim 1, wherein the at least one film-forming gradient copolymer comprises polymer chains comprising at least one monomeric residue, Mi, wherein there is a non-zero probability of finding the monomeric residue Mi along the polymer chain, regardless of the normalized position (x) on the polymer chain.

21. The composition according to Claim 1, wherein the at least one film-forming gradient copolymer is such that on a curve of liquid adsorption chromatography ("LAC"), which shows the proportion of polymers as a function of the elution volume, the difference ($V^{1/2}$max – $V^{1/2}$min) is less than or equal to 3.5, wherein "$V^{1/2}$min" is the minimum value of the elution volume at mid-height of the curve, and "$V^{1/2}$max" is the maximum value of the elution volume at mid-height of the curve.

22. The composition according to Claim 21, wherein the difference ($V^{1/2}$max – $V^{1/2}$min) ranges from 1 to 2.8.

23. The composition according to Claim 22, wherein the difference ($V^{1/2}$max – $V^{1/2}$min) ranges from 1.2 to 2.5.

24. The composition according to Claim 1, wherein the at least one film-forming gradient copolymer comprises at least two different monomeric residues, each of which is present in an amount ranging from 1% to 99% by weight, relative to the total weight of the copolymer.

25. The composition according to Claim 24, wherein the at least one film-forming gradient comprises at least two different monomeric residues, each of which is present in

an amount ranging from 2% to 98% by weight, relative to the total weight of the copolymer.

26. The composition according to Claim 25, wherein the at least one film-forming gradient comprises at least two different monomeric residues, each of which is present in an amount ranging from 5% to 95% by weight, relative to the total weight of the copolymer.

27. The composition according to Claim 1, wherein the at least one film-forming gradient copolymer comprises at least one hydrophilic monomeric residue.

28. The composition according to Claim 27, wherein the at least one hydrophilic monomeric residue is present in an amount ranging from 1% to 99% by weight, relative to the total weight of the copolymer.

29. The composition according to Claim 28, wherein the at least one hydrophilic monomeric residue is present in an amount ranging from 2% to 70% by weight, relative to the total weight of the copolymer.

30. The composition according to Claim 29, wherein the at least one hydrophilic monomeric residue is present in an amount ranging from 5% to 50% by weight, relative to the total weight of the copolymer.

31. The composition according to Claim 30, wherein the at least one hydrophilic monomeric residue is present in an amount ranging from 10% to 30% by weight, relative to the total weight of the copolymer.

32. The composition according to Claim 1, wherein the at least one film-forming gradient copolymer comprises at least one monomeric residue, said at least one monomeric residue resulting from at least one monomer which is capable of forming a homopolymer with a Tg less than or equal to 20°C.

33. The composition, according to Claim 32, wherein the homopolymer has a Tg ranging from 150°C to 20°C

34. The composition, according to Claim 33, wherein the homopolymer has a Tg ranging from 130°C to 18°C.

35. The composition, according to Claim 34, wherein the homopolymer has a Tg ranging from 120°C to 15°C.

36. The composition according to Claim 32, wherein the at least one monomer which is capable of forming a homopolymer with a Tg less then or equal to 20°C is present in an amount of monomeric residue ranging from 1% to 99% by weight, relative to the total weight of the copolymer.

37. The composition according to Claim 36, wherein the at least one monomer is present in an amount of monomeric residue ranging from 10% to 90% by weight, relative to the total weight of the copolymer.

38. The composition according to Claim 37, wherein the at least one monomer is present in an amount ranging from 20% to 80% by weight, relative to the total weight of the copolymer.

39. The composition according to Claim 38, wherein the at least one monomer is present in an amount ranging from 50% to 75% by weight, relative to the total weight of the copolymer.

40. The composition according to Claim 27, wherein the at least one film-forming gradient copolymer comprises at least one hydrophilic monomeric residue chosen from residues of :

- derivatives of C_1-C_6 aminoalkyl (meth)acrylates;
- C_1-C_4 N,N-dialkyl(meth)acrylamides;
- C_1-C_4N,N-dialkylC_1-C_6aminoalkyl(meth)acrylamides;
- C_1-C_8 dialkyldiallylamines;

- vinylamines;

- vinylpyridines, ;

acid salts thereof and quaternized forms thereof;

- carboxylic acids;

- carboxylic anhydrides comprising at least one vinyl bond;

- ethylenic sulphonic acids and their salts,

- vinylbenzoic acids, vinylphosphonic acids, and their salts;

- potassium salts of acryloyloxy-3-sulphopropyl, compounds of formula $CH_2=CHCOOCH_2OCH_2(OH)CH_2SO_3^-Na^+$;

- amides of unsaturated carboxylic acids;

- hydroxyalkyl (meth)acrylates;

- (meth)acrylates of polyethylene glycol (5 to 100 EO) and of glycol, optionally substituted on their terminal function by a group chosen from alkyls, phosphates, phosphonates and sulphonate groups;

- alkoxyalkyl (meth)acrylates;

- (meth)acrylates of polysaccharides;

- vinylamides;

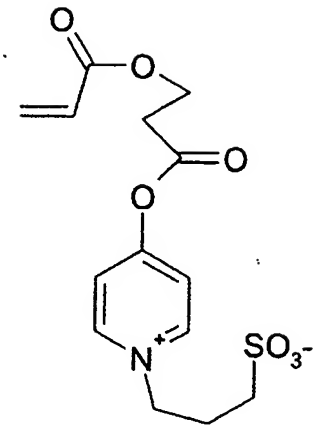
- vinyl ethers;

- methacrylamidopropoxytrimethylammoniumbetaine;

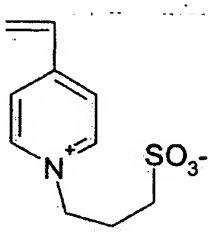
- N,N-dimethyl-N-methacryloxyethyl-N-(3-sulphopropyl)ammoniumbetaine,

- 3-methacryloylethoxycarbonylpyridinium;

- a compound of formula:



and 4-vinylpyridiniumsulphopropylbetaine of formula:



41. The composition according to Claim 40, wherein the derivates of C_1-C_6 aminoalkyl (meth)acrylates are chosen from N,N-di(C_1-C_4)alkylamino(C_1-C_6)alkyl (meth)acrylates.

42. The composition according to Claim 41, wherein the N,N-di(C_1-C_4)alkylamino(C_1-C_6)alkyl (meth)acrylates are chosen from N,N-dimethylaminoethyl methacrylate (MADAME) and N,N-diethylaminoethyl methacrylate (DEAMEA).

43. The composition according to Claim 40, wherein the C_1-C_4 N,N-dialkyl(meth)acrylamides and C_1-C_4N,N-dialkylC_1-C_6aminoalkyl(meth)acrylamides are chosen from N,N-dimethylacrylamide, N,N-dimethylaminopropylacrylamide (DMAPA), and N,N-dimethylaminopropylmethacrylamide (DMAPMA).

44. The composition according to Claim 40, wherein the C_1-C_8

dialkyldiallylamines are chosen from dimethyldiallylamine.

45. The composition according to Claim 40, wherein the vinylpyridines are chosen from 2-vinylpyridine and 4-vinylpyridine.

46. The composition according to Claim 40, wherein the carboxylic acids are chosen from acrylic, methacrylic, crotonic, itaconic, fumaric, and maleic acids.

47. The composition according to Claim 46, wherein the carboxylic acids are chosen from acrylic acid.

48. The composition according to Claim 40, wherein the carboxylic anhydrides comprising at least one vinyl bond are chosen from maleic anhydride.

49. The composition according to Claim 40, wherein the ethylenic sulphonic acids are chosen from styrenesulphonic acid and acrylamidopropanesulphonic acid.

50. The composition according to Claim 40, wherein the amides of unsaturated carboxylic acids are chosen from acrylamide, methacrylamide, and their N-substituted derivatives.

51. The composition according to Claim 50, wherein the N-substituted derivatives are chosen from C_1-C_4 N-alkyl(meth)acrylamides and C_1-C_4 N,N-dialkyl(meth)acrylamides.

52. The composition according to Claim 51, wherein the C_1-C_4 N-alkyl(meth)acrylamides are chosen from N-methylacrylamide.

53. The composition according to Claim 51, wherein the C_1-C_4 N,N-dialkyl(meth)acrylamides are chosen from N,N-dimethylacrylamide.

54. The composition according to Claim 40, wherein the hydroxyalkyl (meth)acrylates are chosen from those wherein the alkyl group comprises from 2 to 4 carbon atoms.

55. The composition according to Claim 54, wherein the hydroxyalkyl

(meth)acrylates are chosen from hydroxyethyl (meth)acrylate.

56. The composition according to Claim 40, wherein the (meth)acrylates of polyethylene glycol (5 to 100 EO) and of glycol, which may be additionally substituted on their terminal function by a group chosen from alkyls, phosphates, phosphonates and sulphonates, are chosen from glycerol acrylates, methoxypolyethylene glycols (meth)acrylates (8 and 12 EO), and hydroxypolyethylene glycol (meth)acrylates.

57. The composition according to Claim 40, wherein the alkoxyalkyl (meth)acrylates are chosen from ethoxyethyl (meth)acrylates.

58. The composition according the Claim 40, wherein the (meth)acrylates of polysaccharide are chosen from sucrose acrylate.

59. The composition according the Claim 40, wherein the vinylamides are chosen from vinyl acetamides and cyclic vinylamides.

60. The composition according to Claim 59, wherein the cyclic vinylamides are chosen from vinyl lactams.

61. The composition according to Claim 60, wherein the vinyl lactams are chosen from N-vinylpyrrolidones and N-vinylcaprolactams.

62. The composition according the Claim 40, wherein the vinyl ethers are chosen from vinyl methyl ether.

63. The composition according to Claim 27, wherein the at least one film-forming gradient copolymer comprises at least one hydrophilic monomeric residue chosen from residues of N,N-dimethylaminoethyl methacrylate (MADAME), acrylic acid, methacrylic acid, crotonic acid, styrenesulphonic acid, acrylamidopropanesulphonic acid, dimethylaminopropylmethacrylamide (DMAPMA); styrene sulphonate, hydroxyethyl acrylate, glycerol acrylate, ethoxyethyl methacrylate, ethoxyethyl acrylate,

methoxypolyethylene glycol (meth)acrylate (8 or 12 EO); hydroxypolyethylene glycol (meth)acrylate, N-vinylpyrrolidone, N-vinylcaprolactam, acrylamides, and N,N-dimethylacrylamide.

64. The composition according to Claim 1, wherein the at least one film-forming gradient copolymer comprises at least one monomeric residue chosen from residues of C_1-C_4 alkyl (meth)acrylates, said C_1-C_4 alkyl (meth)acrylates leading to (meth)acrylic acid after hydrolysis.

65. The composition according to Claim 64, wherein the C_1-C_4 alkyl (meth)acrylates are chosen from *tert*-butyl (meth)acrylates and ethyl (meth)acrylates.

66. The composition according to Claim 1, wherein the at least one film-forming gradient copolymer comprises at least one monomeric residue, said at least one monomeric residue resulting from at least one monomer which is capable of forming a homopolymer with a Tg less than or equal to 20°C, wherein the at least one monomer is chosen from:

- ethylenic hydrocarbons comprising from 2 to 10 carbons;
- acrylates with the formula CH_2=CHCOOR_1, wherein R_1 can be chosen from saturated and unsaturated hydrocarbon groups, comprising from 1 to 12 carbons, which may be linear and branched with the exception of the *tert*-butyl group, and optionally comprising at least one heteroatom chosen from O, N, S, and Si, wherein the alkyl groups are optionally substituted by at least one substituent chosen from hydroxyl groups and the halogen atoms chosen from Cl, Br, I, and F;

R_1 can also be chosen from groups of the formula: –(R")x-$(OC_2H_4)_n$-OR', wherein x is an integer chosen from 0 and 1, R" is chosen from saturated and unsaturated, linear and branched, hydrocarbon groups, comprising from 1 to 12 carbon atoms, n is an integer

chosen from 5 to 100 and R'is chosen from H and CH_3;

- methacrylates of formula: $CH_2=C(CH_3)-COOR_2$, wherein R_2 is chosen from saturated and unsaturated hydrocarbon groups, comprising from 3 to 12 carbon atoms, linear and branched, optionally comprising at least one heteroatom chosen from O, N, S and Si, wherein R_2 is optionally substituted with at least one substituent chosen from hydroxyl groups and halogen atoms chosen from Cl, Br, I, and F; R_2 can also be chosen from groups of the formula: $-(R")x-(OC_2H_4)_n-OR'$, wherein x is an integer chosen from 0 and 1, R" is chosen from saturated and unsaturated, linear and branched, hydrocarbon groups, comprising from 1 to 12 carbon atoms, n is an integer chosen from 5 to 100 and R'is chosen from H and CH_3;

- N- and N,N-substituted derivatives of amides of C_{1-12} unsaturated carboxylic acids;

- vinyl esters of formula: $R_3-CO-O-CH=CH_2$ wherein R_3 is chosen from linear and branched alkyl groups comprising from 2 to 12 carbon atoms; and

- vinyl alkyl ethers comprising from 1 to 12 carbon atoms.

67. The composition according to Claim 66, wherein the ethylenic hydrocarbons comprising from 2 to 10 carbons are chosen from ethylenes, isoprenes, and butadienes.

68. The composition according to Claim 66, wherein the N- and N,N-substituted derivatives of amides of C_{1-12} unsaturated carboxylic acids are chosen from C_{1-12} N-alkyl(meth)acrylamides.

69. The composition according to Claim 68, wherein the C_{1-12} N-alkyl(meth)acrylamides are chosen from N-octylacrylamide.

70. The composition according to Claim 66, wherein the vinyl esters are chosen from vinyl propionates, vinyl butyrates, vinyl ethylhexanoates, vinyl neononanoates, and vinyl neododecanoates.

71. The composition according to Claim 66, wherein the vinyl alkyl ethers comprising from 1 to 12 carbon atoms are chosen from vinyl methyl ethers, and vinyl ethyl ethers.

72. The composition according to Claim 1, wherein the at least one film-forming gradient copolymer comprises at least one monomeric residue resulting from at least one monomer which is capable of forming a homopolymer with a Tg less than or equal to 20°C, wherein the at least one monomer is chosen from:

- isoprenes and butadienes;
- methyl, ethyl, isobutyl, n-butyl, ethylhexyl, methoxyethyl, ethoxyethyl and hydroxypolyethylene glycol acrylates;
- ethoxyethyls, hexyls, ethylhexyls and hydroxypolyethylene glycol methacrylates;
- C_{6-12} N-alkyl(meth)acrylamides;
- vinyl esters with the formula: R_3-CO-O-CH=CH_2 wherein R_3 is chosen from linear and branched, alkyl groups comprising from 6 to 12 carbon atoms.

73. The composition according to Claim 72, wherein the C_{6-12} N-alkyl(meth)acrylamides are chosen from N-octylacrylamide.

74. The composition according to Claim 72, wherein the vinyl esters are chosen from vinyl neononanoates and vinyl neododecanoates.

75. The composition according to Claim 1, wherein the at least one film-forming gradient copolymer comprises at least one monomeric residue resulting from at least one monomer which is capable of forming a homopolymer with a Tg less than or equal to 20°C, wherein the at least one monomer is chosen from:

- vinyl compounds with the formula: CH_2=CH-R_4, wherein R_4 is chosen from hydroxyl group; –NH-C(O)-CH_3 group; -OC(O)-CH_3 group; C_3-C_8 cycloalkyl groups; C_6-C_{20} aryl

groups; C_7 to C_{30} aralkyl groups (C_1-C_4 alkyl group); heterocyclic groups comprising from 4 to 12 chain members comprising at least one heteroatom chosen from O, N and S; heterocyclylalkyl groups (C_1-C_4 alkyl); wherein the cycloalkyls, aryls, aralkyls, heterocyclic, and heterocyclylalkyl groups are optionally substituted by at least one substituent chosen from hydroxyl groups, halogen atoms, and alkyl groups comprising from 1 to 4 carbon atoms, linear and branched, and optionally comprising at least one heteroatom chosen from O, N, S and P, and wherein the alkyl groups are optionally substituted by at least one substituent chosen from hydroxyl group, halogen atoms chosen from Cl, Br, I and F, and Si;

- acrylates of formula CH_2=CH-$COOR_5$, wherein R_5 is chosen from *tert*-butyl groups, C_3-C_8 cycloalkyl groups; C_6-C_{20} aryl groups; C_7-C_{30} aralkyl groups (C_1-C_4 alkyl groups); heterocyclic groups comprising from 4 to 12 chain members comprising at least one heteroatom chosen from O, N, and S; heterocyclylalkyl groups (C_1-C_4 alkyl); wherein the cycloalkyls, aryls, aralkyls, heterocyclic and heterocyclylalkyl groups are optionally substituted by at least one substituent chosen from hydroxyl groups, halogen atoms, and linear and branched C_1-C_4 alkyl groups and optionally comprising at least one heteroatom chosen from O, N, S and P, wherein the alkyl groups are optionally substituted by at least one substituent chosen from hydroxyl groups, halogen atoms chosen from Cl, Br, I and F), and Si;

- methacrylates of the formula CH_2=C(CH_3)-$COOR_6$, wherein R_6 is chosen from linear and branched alkyl groups comprising from 1 to 4 carbon atoms, wherein the alkyl groups are optionally substituted by at least one substituent chosen from hydroxyl group, halogen atoms chosen from Cl, Br, I and F, and Si; C_3-C_8 cycloalkyl groups; C_6-C_{20} aryl groups; C_7-C_{30} aralkyl groups (C_1-C_4 alkyl groups); heterocyclic groups comprising from 4 to 12 chain

members comprising at least one heteroatom chosen from O, N, and S; heterocyclylalkyl groups (C_1-C_4 alkyl); wherein the cycloalkyls, aryls, aralkyls, heterocyclic, and heterocyclylalkyl groups are optionally substituted by at least one substituent chosen from hydroxyl groups, halogen atoms, and linear and branched alkyl groups comprising from 1 to 4 carbon atoms, and optionally comprising at least one heteroatom chosen from O, N, S and P, wherein the alkyl groups are optionally substituted by at least one substituent chosen from hydroxyl groups and halogen atoms chosen from Cl, Br, I and F;

- (meth)acrylamides with the formula: $CH_2=C(R')-CO-NR_7R_8$,

wherein R_7 and R_8, which may be identical or different, are chosen from a hydrogen atom and linear and branched alkyl groups comprising from 1 to 12 carbon atoms and R' is chosen from a hydrogen atom and methyl.

76. The composition according to Claim 75, wherein the heterocyclylalkyl groups (C_1-C_4 alkyl) are chosen from furfuryl groups.

77. The composition according to Claim 75, wherein the linear and branched alkyl groups comprising from 1 to 4 carbon atoms, are chosen from methyl, ethyl, propyl and isobutyl groups.

78. The composition according to Claim 75, wherein the linear and branched alkyl groups comprising 1 to 12 carbon atoms are chosen from n-butyl, t-butyl, isopropyl, isohexyl, isooctyl, and isononyl groups.

79. The composition according to Claim 1, wherein the at least one film-forming gradient copolymer comprises at least one monomeric residue, said at least one monomeric residue resulting from at least one monomer which is capable of forming a homopolymer with a Tg greater than or equal to 20°C, wherein the at least one monomer is chosen from:

- furfuryl, isobornyl, *tert*-butyl, *tert*-butylcyclohexyl and *tert*-butylbenzyl acrylates;

- methyl, n-butyl, ethyl and isobutyl methacrylates,

- styrene, styrene sulphonates;

- vinyl acetates and vinylcyclohexanes.

80. The composition according to Claim 1, wherein the at least one film-forming gradient copolymer is present in an amount ranging from 0.1% to 60% by weight, relative to the total weight of the composition.

81. The composition according to Claim 80, wherein the at least one film-forming gradient copolymer is present in an amount ranging from 0.5% to 40% by weight, relative to the total weight of the composition.

82. The composition according to Claim 81, wherein the at least one film-forming gradient copolymer is present in an amount ranging from 1% to 35% by weight, relative to the total weight of the composition.

83. The composition according to Claim 82, wherein the at least one film-forming gradient copolymer is present in an amount ranging from 5% to 30% by weight, relative to the total weight of the composition.

84. The composition according to Claim 1, wherein the at least one film-forming gradient copolymer is present in dissolved form or else in the form of an aqueous or organic dispersion.

85. The composition according to Claim 84, wherein the dissolved form is present in water or an organic solvent.

86. The composition according to Claim 1, comprising at least one additional constituent chosen from water; organic solvents; anionic, cationic, nonionic and amphoteric film-forming polymers; fixing polymers; volatile and non-volatile silicones; anionic, cationic,

amphoteric and nonionic surfactants, thickening agents, pearlescent agents, UV filters, free-radical scavengers, perfumes, preservatives, pigments and colorants, pH adjusters, solubilizing agents, plasticizers, antifoaming agents, waxes and oils, vitamins, conditioning agents and organic and mineral particles, synthetic particles and particles of natural origin.

87. A device comprising an aerosol composition comprising at least one propellant and at least one hair-cosmetic composition comprising, in a cosmetically acceptable medium, at least one film-forming gradient copolymer comprising at least two different monomers, wherein the at least one film-forming gradient copolymer exhibits a mass polydispersity index (Ip) less than or equal to 2.5,

wherein the composition is able to form a film that has at least one of the following characteristics:

- a strain at break ε_r ranging from 5% to 2500%,

- a Young's modulus ranging from 0.5 to 1200 MPa, and

- an instantaneous elastic recovery ε_i greater than or equal to 10%.

88. The device according to Claim 87, wherein the propellant is chosen from dimethyl ether; C_{3-5} alkanes; 1,1-difluoroethane, mixtures of dimethyl ether and C_{3-5} alkanes, and mixtures of 1,1-difluoroethane and of dimethyl ether and C_{3-5} alkanes.

89. The device according to Claim 88, wherein the C_{3-5} alkanes are chosen from n-butane and isobutene.

90. The composition according to Claim 1, said composition being a haircare product for maintaining a hairstyle or for shaping the hair chosen from shampoos, gels, setting lotions, lotions for blow-drying, and fixing and styling compositions.

91. The composition according to Claim 90, wherein the styling compositions are chosen from lacquers and sprays.

92. A method for treating hair, comprising applying to the hair a hair-cosmetic composition comprising, in a cosmetically acceptable medium, at least one film-forming gradient copolymer comprising at least two different monomeric residues, wherein the at least one film-forming gradient copolymer exhibits a mass polydispersity index (Ip) less than or equal to 2.5,

wherein the composition forms on the hair a film that has at least one of the following characteristics:

- a strain at break ε_r ranging from 5% to 2500%,

- a Young's modulus ranging from 0.5 to 1200 MPa, and

- an instantaneous elastic recovery ε_i greater than or equal to 10%,

and, if necessary, leaving the hair so treated to dry.

93. A method for treating hair, comprising spraying on the hair an aerosol composition comprising at least one propellant and at least one hair-cosmetic composition comprising, in a cosmetically acceptable medium, at least one film-forming gradient copolymer comprising at least two different monomeric residues, wherein the at least one film-forming gradient copolymer exhibits a mass polydispersity index (Ip) less than or equal to 2.5,

wherein the composition forms a film on the hair that has at least one of the following characteristics:

- a strain at break ε_r ranging from 5% to 2500%,

- a Young's modulus ranging from 0.5 to 1200 MPa, and

- an instantaneous elastic recovery ε_i greater than or equal to 10%, and, if necessary, leaving the hair so treated to dry.